

## CLAIMS

- 1        1. An apparatus for synchronizing software, the apparatus comprising:
  - 2              at least one processor;
  - 3              a memory coupled to the at least one processor; and
  - 4              a software fix manager residing in the memory, the software fix manager  
5              comparing a software inventory of a target computer with a preferred software  
6              inventory to determine at least one software product synchronization for at least  
7              one software product on the target computer.
- 1        2. The apparatus of claim 1 further comprising an update controller residing in the  
2              memory that applies the at least one software product synchronization to the target  
3              computer.
- 1        3. The apparatus of claim 1 wherein the software inventory comprises a software fix  
2              inventory that comprises at least one fix record of at least one software product on  
3              the target computer, and wherein the preferred software inventory comprises a  
4              preferred software fix inventory that comprises at least one preferred fix record of  
5              at least one software product.
- 1        4. The apparatus of claim 3 wherein each fix record comprises a product  
2              identification, a fix identification, and a product release for the corresponding at  
3              least one software product.
- 1        5. The apparatus of claim 2 wherein the update controller applies the at least one  
2              software product synchronization by directing an operating system on the target

- 3 computer to install at least one software product fix for the at least one software  
4 product, the at least one software product fix corresponding to the at least one  
5 software product synchronization.
- 1 6. The apparatus of claim 2 wherein the update controller receives the at least one  
2 software product fix from a source system.
- 1 7. The apparatus of claim 2 wherein the update controller applies the at least one  
2 software product synchronization by directing an operating system on the target  
3 computer to remove at least one software product fix for the at least one software  
4 product, the at least one software product fix corresponding to the at least one  
5 software product synchronization.
- 1 8. The apparatus of claim 2 wherein the update controller determines the software  
2 inventory of the target computer by querying the target computer.
- 1 9. The apparatus of claim 1 wherein the software fix manager retrieves the preferred  
2 software inventory from a model system.
- 1 10. The apparatus of claim 2 wherein the software inventory comprises a software  
2 product inventory, wherein the at least one software product synchronization  
3 indicates if the at least one software product should be installed or removed, and  
4 wherein the update controller applies the at least one software product  
5 synchronization by directing an operating system on the target computer to  
6 respectively install or remove the at least one software product.

- 1       11. An apparatus for synchronizing software in a network, the apparatus comprising:
- 2                  a managing computer comprising a software fix manager, the software fix manager  
3                  comparing at least one software fix inventory of at least one of a plurality of target  
4                  computers in the network with a preferred software fix inventory to determine at  
5                  least one software product synchronization for at least one software product on  
6                  the at least one target computer, the managing computer sending the at least one  
7                  software product synchronization to the at least one target computer.
- 1       12. The apparatus of claim 11 wherein each of the target computers comprises an  
2                  update controller and a software fix inventory, each update controller capable of  
3                  applying software product synchronizations to its respective target computer, each  
4                  software fix inventory comprising at least one fix record of at least one software  
5                  product on the respective target computer, and wherein the update controller for  
6                  the at least one target computer applies the at least one software product  
7                  synchronization to the at least one target computer.
- 1       13. The apparatus of claim 12 wherein the at least one update controller applies the at  
2                  least one software product synchronization to the at least one target computer by  
3                  directing an operating system of the at least one target computer to install at least  
4                  one software product fix for the at least one software product on the at least one  
5                  target computer, the at least one software product fix corresponding to the at least  
6                  one software product synchronization.
- 1       14. The apparatus of claim 13 further comprising a source system, the source system  
2                  comprising a plurality of software product fixes, and wherein the update controller  
3                  for the at least one target computer receives at least one software product fix from  
4                  the source system.

- 1       15. The apparatus of claim 12 wherein the at least one update controller applies the at  
2           least one software product synchronization to the at least one target computer by  
3           directing an operating system on the at least one target computer to remove at  
4           least one software product fix for the at least one software product on the at least  
5           one computer, the at least one software product fix corresponding to the at least  
6           one software product synchronization.
- 1       16. The apparatus of claim 12 wherein the at least one fix record on each target  
2           computer comprises a product identification, a fix identification, and a product  
3           release.
- 1       17. The apparatus of claim 12 wherein at least one of the plurality of update  
2           controllers determines the software fix inventory for its respective target computer  
3           by querying the respective target computer.
- 1       18. The apparatus of claim 11 further comprising a model system that comprises the  
2           preferred software fix inventory, the software fix manager retrieving the preferred  
3           software fix inventory from the model system.
- 1       19. The apparatus of claim 11 wherein the at least one software product  
2           synchronization is part of a fix list, wherein the fix list further comprises a plurality  
3           of software product synchronizations for a plurality of software products on the  
4           plurality of computers, and wherein the fix list is a union of software product  
5           synchronizations.
- 1       20. The apparatus of claim 12 wherein each target computer further comprises a  
2           software product inventory, each software product inventory comprising at least  
3           one product record of at least one software product on the target computer,  
4           wherein the software fix manager further compares at least one software product

5 inventory of at least one of the plurality of target computers in the network with a  
6 preferred software product inventory to add at least one software product  
7 synchronization for at least one software product on the at least one target  
8 computer to the fix list, and wherein the at least one software product  
9 synchronization indicates if the at least one software product should be installed or  
10 removed.

- 1       21. A method for synchronizing software, the method comprising the steps of:  
2           comparing a software inventory of a target computer with a preferred software  
3           inventory;  
4  
5           creating at least one software product synchronization for at least one software  
6           product on the target computer; and  
7  
8           applying the at least one software product synchronization to the target computer.
- 1       22. The method of claim 21 wherein the software inventory comprises a software fix  
2           inventory that comprises at least one fix record of at least one software product on  
3           the target computer, and wherein the preferred software inventory comprises a  
4           preferred software fix inventory that comprises at least one preferred fix record of  
5           at least one software product on a model system.
- 1       23. The method of claim 22 wherein each fix record comprises a product  
2           identification, a fix identification, and a product release for the corresponding at  
3           least one software product.
- 1       24. The method of claim 21 wherein the step of applying the at least one software  
2           product synchronization comprises the step of directing an operating system on the  
3           target computer to install at least one software product fix for the at least one

- 4           software product, the at least one software product fix corresponding to the at  
5           least one software product synchronization.
- 6       25. The method of claim 24 wherein the method further comprises the step of  
7           receiving the at least one software product fix from a source system.
- 1       26. The method of claim 21 wherein the step of applying the at least one software  
2           product synchronization comprises the step of directing an operating system on the  
3           target computer to remove at least one software product fix for the at least one  
4           software product, the at least one software product fix corresponding to the at  
5           least one software product synchronization.
- 1       27. The method of claim 21 further comprising the step of determining the software fix  
2           inventory by querying the target computer.
- 1       28. The method of claim 21 wherein the method further comprises the step of the  
2           retrieving the preferred software fix inventory from a model system.
- 1       29. The method of claim 21 wherein the software inventory comprises a software  
2           product inventory, wherein the at least one software product synchronization  
3           indicates if the at least one software product should be installed or removed, and  
4           wherein the step of applying the at least one software product synchronization to  
5           the target computer comprises the step of directing an operating system on the  
6           target computer to respectively install or remove the at least one software product.

- 1       30. A method for synchronizing software in a network, the method comprising the  
2       steps of:
- 3           providing a software fix manager that resides on a managing computer in the  
4           network, the managing computer comprising a preferred software fix inventory,  
5           the preferred software fix inventory comprising at least one preferred fix record of  
6           at least one software product;
- 7           providing an update controller residing on at least one target computer in the  
8           network, the at least one target computer comprising a target software fix  
9           inventory, the target software fix inventory comprising at least one fix record of at  
10          least one software product on the at least one target computer;
- 11          comparing the target software fix inventory with the preferred software fix  
12          inventory;
- 13          creating and updating a fix list based on the comparison, the fix list comprising at  
14          least one software product synchronization for at least one software product on  
15          the at least one target computer;
- 16          sending the fix list to the at least one target computer; and
- 17          applying the at least one software product synchronization to the at least one  
18          target computer.

- 1       31. The method of claim 30 wherein the step of applying the at least one software  
2       product synchronization to the at least one target computer comprises the step of  
3       directing an operating system on the at least one target computer to install at least  
4       one software product fix for the at least one software product on the at least one

5 target computer, the at least one software product fix corresponding to the at least  
6 one software product synchronization.

1 32. The method of claim 31 wherein the network further comprises a source system,  
2 the source system comprising a plurality of software product fixes, and wherein the  
3 method further comprises the step of the update controller receiving the at least  
4 one software product fix from the source system.

1 33. The method of claim 30 wherein the step of applying the at least one software  
2 product synchronization to the at least one target computer comprises the step of  
3 directing an operating system on the at least one target computer to remove at  
4 least one software product fix for the at least one software product on the at least  
5 one target computer, the at least one software product fix corresponding to the at  
6 least one software product synchronization.

1 34. The method of claim 30 wherein each preferred fix record and each fix record  
2 comprises a product identification, a fix identification, and a product release for the  
3 respective at least one software product.

1 35. The method of claim 30 further comprising the step of the update controller  
2 determining the target software fix inventory of the at least one target computer by  
3 querying the at least one target computer.

1 36. The method of claim 30 wherein the network further comprises a model system  
2 comprising the preferred software fix inventory, and wherein the method further  
3 comprises the step of the software fix manager retrieving the preferred software fix  
4 inventory from the model system.

37. The method of claim 30 wherein the at least one target computer is a plurality of target computers, wherein the fix list further comprises a plurality of software product synchronizations for a plurality of software products on the plurality of target computers, and wherein the fix list is a union of the plurality of software product synchronizations.
  38. A program product comprising:
    - a software fix manager comparing a software inventory of a target computer with a preferred software inventory to determine at least one software product synchronization for at least one software product on the target computer; and
    - signal bearing media bearing the software fix manager.
  39. The program product of claim 38 wherein the signal bearing media comprises transmission media.
  40. The program product of claim 38 wherein the signal bearing media comprises recordable media.
  41. The program product of claim 38 further comprising an update controller that applies the at least one software product synchronization to the target computer, and wherein the signal bearing media further bears the update controller.
  42. The program product of claim 38 wherein the software inventory comprises a software fix inventory that comprises at least one fix record of at least one software product on the target computer, and wherein the preferred software inventory comprises a preferred software fix inventory that comprises at least one preferred fix record of at least one software product.

- 1       43. The program product of claim 42 wherein each fix record comprises a product  
2                  identification, a fix identification, and a product release for the corresponding at  
3                  least one software product.
- 1       44. The program product of claim 41 wherein the update controller applies the at least  
2                  one software product synchronization by directing an operating system on the  
3                  target computer to install at least one software product fix for the at least one  
4                  software product, the at least one software product fix corresponding to the at  
5                  least one software product synchronization.
- 1       45. The program product of claim 41 wherein the update controller receives the at  
2                  least one software product fix from a source system.
- 1       46. The program product of claim 41 wherein the update controller applies the at least  
2                  one software product synchronization by directing an operating system on the  
3                  target computer to remove at least one software product fix for the at least one  
4                  software product, the at least one software product fix corresponding to the at  
5                  least one software product synchronization.
- 1       47. The program product of claim 41 wherein the update controller determines the  
2                  software inventory of the target computer by querying the target computer.
- 1       48. The program product of claim 38 wherein the software fix manager retrieves the  
2                  preferred software inventory from a model system.
- 1       49. The program product of claim 41 wherein the software inventory comprises a  
2                  software product inventory, wherein the at least one software product  
3                  synchronization indicates if the at least one software product should be installed or

4 removed, and wherein the update controller applies the at least one software  
5 product synchronization by directing an operating system on the target computer  
6 to respectively install or remove the at least one software product.

- 1 50. A program product for synchronizing software in a network, the program product  
2 comprising:

3 a software fix manager able to reside on a managing computer, the software fix  
4 manager comparing at least one software fix inventory of at least one of a plurality  
5 of target computers in the network with a preferred software fix inventory to  
6 determine at least one software product synchronization for at least one software  
7 product on the at least one target computer, the software fix manager sending the  
8 at least one software product synchronization to the at least one target computer;  
9 and

10 signal bearing media bearing the software fix manager.

- 1 51. The program product of claim 50 wherein the signal bearing media comprises  
2 transmission media.

- 1 52. The program product of claim 50 wherein the signal bearing media comprises  
2 recordable media.

- 1 53. The program product of claim 50 further comprising an update controller able to  
2 reside on each of the plurality of target computers, each of the target computers  
3 comprising a software fix inventory, each update controller capable of applying  
4 software product synchronizations to its respective target computer, each software  
5 fix inventory comprising at least one fix record of at least one software product on  
6 the respective target computer, wherein the update controller for the at least one

7 target computer applies the at least one software product synchronization to the at  
8 least one target computer.

- 1 54. The program product of claim 53 wherein the at least one update controller applies  
2 the at least one software product synchronization to the at least one target  
3 computer by directing an operating system of the at least one target computer to  
4 install at least one software product fix for the at least one software product on the  
5 at least one target computer, the at least one software product fix corresponding to  
6 the at least one software product synchronization.
- 1 55. The program product of claim 53 wherein the update controller for the at least one  
2 target computer receives at least one software product fix from a source system,  
3 the source system comprising a plurality of software product fixes.
- 1 56. The program product of claim 53 wherein the at least one update controller applies  
2 the at least one software product synchronization to the at least one target  
3 computer by directing an operating system on the at least one target computer to  
4 remove at least one software product fix for the at least one software product on  
5 the at least one computer, the at least one software product fix corresponding to  
6 the at least one software product synchronization.
- 1 57. The program product of claim 53 wherein the at least one fix record on each target  
2 computer comprises a product identification, a fix identification, and a product  
3 release.
- 1 58. The program product of claim 53 wherein at least one of the plurality of update  
2 controllers determines the software fix inventory for its respective target computer  
3 by querying the respective target computer.

- 1       59. The program product of claim 50 wherein the software fix manager retrieves the  
2                    preferred software fix inventory from a model system that comprises the preferred  
3                    software fix inventory.
- 1       60. The program product of claim 53 wherein the at least one software product  
2                    synchronization is part of a fix list, wherein the fix list further comprises a plurality  
3                    of software product synchronizations for a plurality of software products on the  
4                    plurality of computers, and wherein the fix list is a union of software product  
5                    synchronizations.
- 1       61. The program product of claim 50 wherein each target computer further comprises  
2                    a software product inventory, each software product inventory comprising at least  
3                    one product record of at least one software product on the target computer,  
4                    wherein the software fix manager further compares at least one software product  
5                    inventory of at least one of the plurality of target computers in the network with a  
6                    preferred software product inventory to add at least one software product  
7                    synchronization for at least one software product on the at least one target  
8                    computer to the fix list, and wherein the at least one software product  
9                    synchronization indicates if the at least one software product should be installed or  
10                  removed.

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